What Is IR&D?

IR&D is research and development initiated and conducted by Defense contractors independent of DoD control and without direct DoD funding. It includes basic and applied research, development, and systems and concept formulation studies. Thousands of IR&D projects, representing billions of investment dollars, are conducted annually.
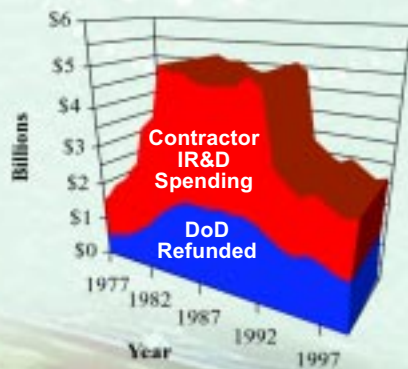
> *"Contractors shall be encouraged to undertake IR&D activities that may further national security in a broad sense, may lead to a superior military capability, or may lower the cost and time required for providing that capabilty."*
>
> *[DoD Directive 3204.1]*

IR&D Spending

Major Defense contractors reduced IR&D spending during the 1990s as Defense procurement spending declined by 40 percent. Nevertheless, IR&D spending still provides a significant supplement to DoD-funded R&D.

Major Contractor IR&D Spending

Chart (Billions vs. Year): Contractor IR&D Spending (red), DoD Refunded (blue). Y-axis $0 to $6 billions. X-axis years 1977, 1982, 1987, 1992, 1997.

Reimbursement of IR&D Costs

The DoD reimburses a portion of "allowable" IR&D costs as indirect expenses under Defense contracts. All IR&D "of potential interest to the DoD" is considered allowable. Allowable costs are allocated proportionately between a contractor's defense and commercial sales and are reimbursed accordingly. In recent years, roughly half of total IR&D costs have been reimbursed by the DoD.

DoD's IR&D Program

Objectives

The major objectives of DoD's IR&D Program are to increase the efficiency and productivity of contractor IR&D activities by:

- Promoting communications with industry about DoD's mission needs and requirements and about DoD's R&D plans and projects.

- Promoting DoD awareness and use of IR&D accomplishments for Defense purposes.

Providing Information to Industry

The DoD is prohibited by law from infringing on the independence of contractors to choose which technologies to pursue in their independent research and development activities. On the other hand, defense contractors are very much interested in responding to Defense needs with their IR&D activities. It is DoD policy to "enhance the efficiency and productivity of contractor IR&D . . . activities by providing to contractors available information useful to their planning and research . . . . Information to be provided includes the R&D plans, descriptions of both in-house and funded research, mission needs, and operational requirements." [DoD Directive 3204.1]

> *"The Department of Defense shall . . . [consider] the work and accomplishments of contractor IR&D programs when planning, programming, and budgeting for DoD R&D."*
>
> *[DoD Directive 3204.1]*

Considering IR&D Accomplishments

The DoD Components have been directed to coordinate the technological aspects of IR&D within the DoD and with Defense contractors through information exchange activities, Technical Interchange Meetings, and other voluntary technical discussions between the scientific, engineering, and operational personnel of the DoD and Defense contractors. Either DoD or contractor personnel may request a voluntary information exchange.

DTIC's IR&D Database

IR&D Information Available from DTIC

The Defense Technical Information Center (DTIC) collects and maintains thousands of IR&D project summaries submitted by Defense contractors in a secure database. The database is restricted to use by authorized U. S. Government personnel. It can be used to identify new technological capabilities applicable to Defense needs and to avoid duplication of contractor IR&D activities by Federal and DoD laboratories or by DoD-funded R&D contracts. (See the back panel of this brochure for information on registering to use the IR&D Database.)

> *"The Department of Defense shall enhance its knowledge of contractor IR&D by reviewing summary reports of contractor IR&D efforts."*
>
> *[DoD Directive 3204.1]*

Meeting Your Technology Needs

The IR&D Database contains a short description of each IR&D project and a contractor point of contact. Projects are categorized to facilitate searching and analysis by technology area or application. The IR&D Database may contain solutions to your technological needs.

For example, a search of the Database revealed a solution to the need of the Air Force's Arnold Engineering Development Center (AEDC) for improved pressure sensitive paint testing technology to reduce aircraft development cycle time. Employing a capability developed by contractor IR&D enabled the DoD to avoid a $10 million dollar expenditure to develop a comparable technology. Use of this IR&D-based capability is saving an additional $1-2 million per aircraft model in wind tunnel testing and up to six months per model in testing time.

Technologies In the IR&D Database

Defense contractors and potential contractors are encouraged to submit IR&D project descriptions for inclusion in the IR&D Database maintained by DTIC. IR&D projects included in the database cover a broad spectrum of topics of interest to the Department of Defense:

- Agriculture
- Astronomy and Astrophysics
- Aviation Technology
- Behavioral and Social Sciences
- Biological and Medical Sciences
- Biotechnology
- Chemistry
- Communications
- Earth Sciences and Oceanography
- Electrotechnology and Fluidics
- Environmental Pollution and Control
- Guided Missile Technology
- Materials
- Mathematical and Computer Sciences
- Mechanical, Industrial, Civil and Marine Engineering
- Military Sciences
- Navigation, Detection and Countermeasures
- Nuclear Science and Technology
- Ordnance
- Physics
- Power Production and Energy Conversion (Nonpropulsive)
- Propulsion, Engines and Fuel
- Space Technology
- Test Equipment, Research Facilities and Reprography

Become an IR&D Database User

Access the IR&D Database online by becoming a registered user of the Defense Technical Information Center (DTIC) services authorized to use the Secure STINET. Registration for Secure STINET service is free to DoD personnel.

For more information and registration forms, go to http://www.dtic.mil/dtic/s-stinet-app.html or contact:

ATTN: DTIC-BC (Registration Team)
Defense Technical Information Center
8725 John J. Kingman Road, Suite 0944
Fort Belvoir, VA 22060-6218

Telephone:
   Commercial (703) 767-8272/
   DSN 427-8272
   Toll Free: 1-800-225-3842

FAX:
   Commercial (703) 767-8228/
   DSN 427-8228

Email: online@dtic.mil

Information on DoD IR&D Programs

OSD IR&D Program
http://www.dtic.mil/ird/

Air Force IR&D Program
http://www.afrl.af.mil/ird/index.htm

Army IR&D Program
http://www.arl.army.mil/tto/ird/

Navy IR&D Program
http://www.onr.navy.mil/sci_tech/industrial/irad.htm

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dhyman@dtic.mil

Ver. 1.0/6-01

Information for DoD Personnel

Independent Research and Development (IR&D)

Defense contractors spend billions of dollars annually on independent research and development. Become an online user of the IR&D Database and learn more about new technologies developed through IR&D.